

TITLE

CONCATENATED VIVALDI NOTCH/MEANDER LINE LOADED ANTENNAS

FIELD OF INVENTION

This invention relates to ultra wide bandwidth antennas, and more particularly to the concatenation of combined Vivaldi notch and meander line loaded antennas.

BACKGROUND OF THE INVENTION

As described in co-pending U.S. Patent Application Serial No. 10/629,659 entitled "Dual Polarization Vivaldi Notch/Meander Line Loaded Antenna" by John T. Apostolos, filed on even date herewith, and as described in Patent Application 10/629,454 entitled "Combined Ultra Wideband Vivaldi Notch/Meander Line Loaded Antenna" by John T. Apostolos, filed on even date herewith, both assigned to the assignee hereof and incorporated herein by reference, it is possible to provide an antenna element which is the combination of a Vivaldi notch and a meander line loaded antenna (MLA). These antennas in general have a top horizontal plate surrounded on two sides by downwardly depending plates which form side plates. The side plates are coupled to the horizontal plate through meander lines.

The purpose of providing such a combined Vivaldi notch antenna and meander line loaded antenna, is to take advantage of the high upper frequency cut-off of the Vivaldi notch antenna while establishing a minimized low frequency cut-off by utilizing the meander line loaded antenna configuration. As described in the above patent applications, the operation of these antennas provides continuous grating lobe-free coverage of, for instance, between 50 MHz